Course Title: Social Dimensions of Disaster, 2nd edition

Session 25: Community Responses to Disaster

1 hr.

Objectives:

- 25.1 Describe six community disaster responses
- 25.2 Discuss four community characteristics that constrain disaster responses
- 25.3 Describe disaster impacts on three community functions
- 25.4 Describe three typical community structural adaptations following disaster
- 25.5 Describe four strategies for integrating non-emergency sectors into the community response
- 25.6 Identify five community conflict resolution strategies.

Scope:

This session introduces students to community level responses to disaster, including factors that constrain such responses and impacts on basic functions. Typical structural adaptations are illustrated as are strategies for integrating non-emergency sectors and conflict resolution techniques.

Readings:

Student Reading:

McEntire, David A. 2001. "Multi-organizational Coordination During the Response to the March 28, 2000, Fort Worth Tornado: An Assessment of Constraining and Contributing Factors." (Quick Response Report #143). Boulder, Colorado: Natural Hazards Research and Applications Information Center, University of Colorado.

Professor Readings:

Wenger, Dennis. 1978. "Community Response to Disaster: Functional and Structural Alterations." Pp. 17-47 in *Disasters: Theory and Research*, edited by E.L. Quarantelli. Beverly Hills, California: Sage Publications.

Howard, B.W. 1999. "Managing Volunteers." *Australian Journal of Emergency Management* 14 (No. 3):37-39.

Kendra, James and Tricia Wachtendorf. 2003. "Creativity in Emergency Response to the World Trade Center Disaster." Pp. 121-146 in *Beyond September 11th: An Account of Post-Disaster Research*. Natural Hazards Research and Applications Information Center, Public Entity Risk Institute and Institute for Civil Infrastructure Systems. Special Publication No. 39. Boulder, Colorado: Natural Hazards Research and Applications Information Center, University of Colorado.

Crawford, Peter. 1998. "Spiritual Issues and Recovery Management." *Australian Journal of Emergency Management* 13 (No. 2):32-34.

Background References:

Lindell, Michael K. and Carla S. Prater. 2003. "Assessing Community Impacts of Natural Hazards." *Natural Hazards Review* 4:176-185.

Millican, Pam. 1997. "Volunteers: A Vision." *Australian Journal of Emergency Management* 12 (No. 2):11-13.

Sweet, Stephen. 1998. "The Effect of a Natural Disaster on Social Cohesion: A Longitudinal Study." *International Journal of Mass Emergencies and Disasters* 16:321-331.

Dynes, Russell, R. 1970. *Organized Behavior in Disaster*. Lexington, Massachusetts: Heath Lexington Books (Chapters 4 and 9 entitled "Disasters and Community Organization" and "Changes in Community Structure in Disaster," pp. 84-108 and pp. 204-215).

Gillespie, David F. 1991. "Coordinating Community Resources." Pp. 55-78 in *Emergency Management: Principles and Practice for Local Government*, edited by Thomas E. Drabek and Gerard J. Hoetmer. Washington, D.C.: International City Management Association.

General Requirements:

Overheads (25-1 through 25-10 appended).

See individual requirements for each objective.

Objective 25.1 Describe six community disaster responses.

Requirements:

Start this session with student exercise and proceed with lecture material specified below.

Overheads 25-1 and 25-2.

Remarks:

- I. Introduction.
 - A. Exercise.
 - 1. **Remind** students of exercise procedures.
 - 2. **Divide** class into four groups and assign roles.
 - a. Chair.
 - b. Reporter.
 - c. Timer.
 - 3. **Announce** time limit: 5 minutes.
 - B. **Display** Overhead 25-1; "Workshop Tasks."
 - 1. Group 1 Summarize the event studied and research methods used by McEntire (2001).
 - 2. Group 2 According to McEntire (2001), what response functions and sectors of the community required coordination?
 - 3. Group 3 According to McEntire (2001), what major constraints on coordination were encountered?
 - 4. Group 4 According to McEntire (2001), what were the major factors that contributed to coordination?
 - C. Start discussion.
 - D. **Stop** discussion.
 - E. **Explain** that reports from Group 3 and 4 will be presented later in the session.
- II. Community disaster responses.

- A. Group 1 report: 2 minutes.
- B. Group 2 report: 2 minutes.
- C. **Display** Overhead 25-2; "Community Disaster Responses".
- D. **Review** topics listed on Overhead 25-2 and **integrate** with student reports. As several of the topics are reviewed, it is recommended that the class and/or members of Group 2 be asked to **provide examples** from McEntire (2001) (adapted from Dynes 1970, pp. 90-99 and 206-211).
 - 1. Development of an emergency consensus.
 - a. Lower priority activities are suspended temporarily as community members focus on those of highest value.
 - b. High priority activities typically include:
 - 1) Care for actual and potential victims.
 - 2) **Restoration of essential community services**, e.g., power, water, telephone, etc.
 - 3) Maintenance of public order.
 - 4) **Maintenance of public morale**, e.g., acts of heroism are highlighted.
 - 2. Development of norms encouraging altruistic behavior.
 - a. Helping behaviors.
 - b. Donation programs.
 - 3. Expansion of citizenship roles.
 - a. Volunteers contact existing organizations, e.g., Red Cross.
 - b. Ad hoc emergent groups.
 - 4. Minimization of community conflict.
 - a. Researchers commonly hear: "Everyone here cooperated."
 - 1) **Urgent needs**, e.g., search and rescue, emergency medical.

- 2) **Present orientation**, e.g., hectic pace pushes old conflicts into background.
- 3) **Social status distinctions** are ignored temporarily, e.g., middle class family shelter lower class victim family.
- 4) **Community identification**, e.g., symbols and acts of heroism intensify identity of neighborhood and community.

5. Creation of task subsystems.

- a. Convergence at disaster scene.
- b. Informational convergence at emergency agency headquarters.
- c. Gradual sorting out of layers of division of labor.

6. Coordination of various task subsystems.

- a. Duplication and shortages are noted.
- b. Tasks ignored or delayed in completion are noted.
- c. Sequential interdependence of many tasks is felt by participants as a type of personal stress, e.g., "people were tripping over each other."

7. Processes of mobilization and reintegration.

- a. Rapid mobilization provides image of chaos.
- b. Resource reallocations are made.
 - 1) **Personnel**.
 - 2) Economic resources.
 - 3) Loyalities.
- c. Gradual shift back to pre-disaster priorities, activities, and loyalities.
- d. **Example**: Personnel mobilizations may involve recalls and extensions of the "normal work day". Additionally, volunteers

become integrated into existing organizations, or at times, form totally new social units.

e. **Remind** students of material covered in Session No. 19 ("Emergent Social Groups in Disaster").

Supplemental Considerations:

Depending on the **quality** of the group reports, some professors may **minimize** lecture illustrations regarding the responses listed on the overhead. Others may seek to elicit **additional illustrations** from the McEntire case study through structured class discussion. Some professors may wish to review Lindell and Prater (2003) and introduce the types of community issues they summarize. Regardless of the strategy used, the **key message** of this section is the seven community responses. Understanding these will enhance student **awareness** and **understanding** of how "the community" can be **conceptualized** as a "unit of analysis."

Objective 25.2 Discuss four community characteristics that constrain disaster responses.

Requirements:

Use Overhead 25-3.

Remarks:

- I. Introduction.
 - A. Group 3 report: 2 minutes.
 - B. Group 4 report: 2 minutes.
- II. Community characteristics that constrain disaster responses.
 - A. **Ask students**: If you think broadly about some of the communities you have read about in this course thus far—remember New York City, Galveston, Dade County, Oklahoma City and so on—what are some of the structural characteristics that differentiate among these? Apart from overall size or population, what qualities might constrain the community response to a disaster?
 - B. **Record**: List student responses on the chalkboard.
 - C. **Display** Overhead 25-3; "Community Characteristics".

D. **Integrate** the topics listed with reports from Groups 3 and 4 and the student generated examples on the chalkboard.

1. Familism.

- a. **Definition**: "Familism means that a greater part of a person's life is controlled and directed by the extended kinship unit." (Dynes 1970, p. 102).
- b. The greater the degree of familism, the greater the degree the disaster response will reflect **activities and support** for victims by the **extended kinship unit**.

2. Integration.

- a. **Definition**: the degree to which the components of a community fit together.
- b. The higher the degree of integration, the greater the probability the disaster response will be **well coordinated** and less conflictual.

3. Organizational complexity.

- a. **Definition**: the number and extent of heterogeneity among organizations within a community.
- b. Highly correlated with, but not the same as population size.
- c. The greater the degree of organizational complexity, the greater the likelihood of specialized agencies that focus on aspects of disaster preparedness, response, recovery and mitigation.

4. Emergency response system.

- a. **Definition**: the local government and private sector agencies, e.g., Red Cross, that respond immediately to a disaster.
- b. The greater the **frequency of community disaster training** and the higher the commitment to disaster preparedness, the more coordinated the response.

5. Prior disaster experience.

a. **Definition**: the number, recency, scope, duration, magnitude and type of disasters that have impacted a community.

d. The greater the **similarity** between a previous event and a new disaster, the greater the degree of coordination.

6. Disaster subcultures.

- a. **Definition**: communities, or sectors of communities whose members possess substantial amounts of instrumental knowledge about effective disaster response that is focused primarily on local hazards; includes norms, values, knowledge, technology, and legends (see Moore 1956 for examples and the origin of this concept).
- b. The greater the development of a **community disaster subculture**, the more coordinated the disaster response.
- c. Also includes **non-adaptive elements** like hurricane parties and family traditions of "riding out the storm".

Supplemental Considerations:

Depending on the quality of the two group reports and the student generated responses, this section could be **very brief**. Some professors, however, may choose to **expand the section** with more detailed discussion of the McEntire case study. Comparisons could be made to other example disasters covered in previous sessions to **enrich student understanding**. The **key message** is that communities vary in many ways and numerous **structural characteristics constrain** the shape and quality of the emergent disaster response.

Objective 25.3 Describe disaster impacts on three community functions.

Requirements:

Use Overhead 25-4.

Remarks:

- I. Community functions.
 - A. Functionalism and functional analysis.
 - 1. Numerous community sociologists have conducted analyses using a theoretical framework known as "functionalism" or "functional analysis," e.g., Warren (1963), Aiken and Mott (1970).

- 2. **Functionalism** was popularized by several sociological theorists who used frameworks with different terminologies, but who sought to identify the functions and structures that were common to most societies, e.g., Parsons (1951). More recently, aspects of this perspective have been proposed by social theorists known as neofunctionalists, e.g., Giddens (1982).
- 3. Some disaster researchers have used this **interpretative** framework to analyze community disaster responses, e.g., Yutzy 1970.

4. The imagery.

- a. Drawn heavily on a biological analogy, i.e., key structures and functions, e.g., stomach (structure) digests (function) food.
- b. What are the **key functions** that must be performed in any community, and what **structures** have evolved to accomplish them?
- B. Common community functions (adapted from Yutzy 1970, p. 346-347).
 - 1. **Production-distribution-consumption**, e.g., businesses.
 - 2. **Socialization**, e.g., schools, family, media.
 - 3. **Social participation**, e.g., churches, voluntary organizations.
 - 4. **Social control**, e.g., government, especially law enforcement, courts, schools.
 - 5. **Mutual support**, e.g., family, religious, and friendship groups, but also social welfare organizations.
- II. Disaster impacts on community functioning.
 - A. Based on numerous case studies, Wenger (1978) concluded that disasters precipitated a new system of functional priorities.
 - B. **Display** Overhead 25-4; "Disaster Impacts on Community Functioning."
 - C. **Review** and illustrate each of the topics listed on Overhead 25-4 (adapted from Wenger 1978, pp. 30-31.
 - 1. Production-distribution-consumption.
 - a. Most change of all five functions.

- b. Closures or reduced schedules, except for disaster relevant goods and services.
- c. Emergent form of social welfare temporarily supplements profit-based market system.

2. Socialization.

- a. Reduced priority, e.g., school closures.
- b. Mass media focus on "disaster news".
- c. Entertainment function of media is reduced temporarily.

3. Social participation.

- a. Suspension of activity, e.g., club meetings cancelled.
- b. Redirection toward disaster generated needs, e.g., blood donation drives, search and rescue, victim transportation, etc.

4. Social control.

- a. Security heightened, e.g., search for looters.
- b. Laws are **not** suspended, but enforcement is more lax unless disaster related, e.g., cause (arson) or disruption (looter).

5. Mutual support.

- a. Highest priority among the five functions.
- b. Victim assistance, e.g., donations.
- c. Ceremonies, e.g., prayer services, burial and memorial services.

Supplemental Considerations:

This section may be **expanded** through guided discussion of **application**, i.e., how were these functions impacted during the response to the Ft. Worth tornado (McEntire 2001)? Many professors, however, will prefer to keep it **brief** and very much **on target** so that other sections of the session can be expanded. The **key messages** are: 1) disaster impacts on five community functions have been **documented** and 2) comparative community analysis has documented substantial **patterning** in these impacts across several **disaster agents**.

Objective 25.4 Describe three typical community structural adaptations following disaster.

Requirements:

Use Overhead 25-5.

Remarks:

- I. Introduction.
 - A. **Ask students**: "Now that we have reviewed the ways in which disasters impact the key functions of a community, let's turn to some structures that emerge and other forms of structural adaptation. Recalling McEntire's case study and our previous sessions in which we focused on types of emergence, what kinds of community level structural adaptations are typical following disaster?"
 - B. **Record**: List student responses on the chalkboard.
- II. Structural adaptations.
 - A. **Display** Overhead 25-5; "Structural Adaptations."
 - B. **Review** and illustrate as necessary the items on Overhead 25-5; **integrate** with student generated examples (adapted from Wenger 1978, pp. 32-38).
 - 1. Emergent disaster values and beliefs.
 - a. Core values are emphasized, e.g., humanitarian aid, protection of life and property.
 - b. If fatalism is a community characteristic, passive acceptance and prayer will be emphasized.
 - c. "American" values elicit explanation of system failures, e.g., who was at fault. If evidence of human error or intent, search for guilty is maximized.

2. Emergent normative structure.

a. "The emergent normative elements support those functions and values by prescribing altruistic and cooperative behavior and proscribing selfish and competitive acts." (p. 33).

- b. Emergent citizenship roles reflect increased emphasis on altruism.
- c. Temporary redefinition of property rights, but **only** if disaster related.

3. Emergent organizational structure.

- a. **Example**: warning phase produces new structure that combines elements of numerous agencies; e.g., law enforcement, fire, weather, health services, etc.
- b. **Example**: when EOC operations have been practiced, the emergent structure that serves as a coordinating unit for the community is mobilized quickly.
- c. **Example**: "... convergence behavior in its many varied forms introduces new elements into the system from the surrounding area. Communication facilities are often overloaded as inquiries from outside the community pour into the system. Mutual-aid agreements represent the formal organizational shape of these external-horizontal ties." (p. 36).

4. Emergent power structure.

- a. **Example**: "... during the immediate pre-impact and post-impact periods a more concentrated distribution of power emerges." (p. 37).
- b. **Example**: "... the possession of disaster-relevant skills and knowledge and powerful resources underlying emergent leadership in the emergency period." (p. 37).

III. Sweet study (1998).

A. Event.

1. **Agent**: ice storm.

2. **Location**: Potsdam, New York.

3. **Date**: January, 1998.

4. Consequences:

- a. Loss of power, two weeks.
- b. Environmental damages, e.g., broken trees.
- c. Federal disaster declaration.

B. Methods.

- 1. Pre-event community survey (February, 1995) (n = 127).
- 2. Post-event community survey (February, 1998) (n = 88).

C. Findings.

- 1. **Impacts**: ice storm had **major effects** on community and citizens, e.g., 50% reported being "... severely or moderately affected by the storm." (p. 325).
- 2. **Social support**: great amounts reported, e.g., 53% reported that **friends helped** a lot and 47% rated neighbors similarly (p. 327). Conversely, 38% reported that **they helped friends** a lot and 41% rated help given to neighbors similarly.
- 3. **Social cohesion**: while very high during and shortly after the storm, the post-event survey ratings indicated that overall community evaluations were **comparable** to those obtained in the pre-event survey. Hence, **increase in community cohesion was temporary** (p. 328).
- D. **Overall conclusion**. "Rather than a distance reshaping community relations dramatically, this study indicates that many disasters can be viewed as temporary disruptions to normalcy. When structure changes out of its normal form, behaviors shift and new types of social relations quickly emerge (Kreps and Bosworth 1994). However, once structure returns to its customary form, perceptions of social relations shift back in accordance with the familiar." (p. 330).

Supplemental Considerations:

The key message of this section is that disasters **induce** certain types of community **structural adaptations**. Some professors may wish to **expand** this section through structured class discussion in which examples from McEntire's (2001) case could be applied to the general patterns documented by Wenger (1978). Others may wish to extend discussion of Sweet's (1998) case study and ask students to consider how different types of disasters might delay a "return to normalcy".

Objective 25.5 Describe four strategies for integrating non-emergency sectors into the community response.

Requirements:

Use Overheads 25-6 through 25-9.

Remarks:

- I. Problems with volunteers.
 - A. **Ask students**: "Based on your reading and personal experiences, what types of problems do volunteers present to emergency managers?"
 - B. **Record**: List student responses on chalkboard.
 - C. **Display** Overhead 25-6; "Typical Problems With Volunteers."
 - D. **Review** and illustrate as required the topics listed on the overhead; **integrate** with student responses (adapted from Millican (1997), pp. 11-13.
 - 1. **Need is increasing**, but number of volunteers is decreasing (Australian experience, less true in U.S.A.).
 - 2. Recruitment difficulties.
 - a. Aged population.
 - b. Rural areas.
 - 3. Staff-union interface.
 - a. Compensation issues.
 - b. Liability issues.
 - 4. Territorial view.
 - a. Volunteer reluctance to work outside community.
 - b. Reluctance to accept "outsider" volunteers.
 - 5. Employment requirements.
 - a. Employer may restrict time off.

- b. Employer may not support training.
- 6. Perception of government role.
 - a. Some believe that government should be resource, not volunteers.
 - b. Some believe that government should not support volunteers regarding equipment, training, or liability costs.
- II. Managing volunteers.
 - A. **Explain**: Given the above problems and many others, there are **common strategies** for effectively managing volunteers. Among these are those described by Howard (1999).
 - B. **Display** Overhead 25-7; "Managing Volunteers."
 - C. **Review** topics listed on overhead and illustrate as required.
 - 1. Role clarity.
 - 2. Protection.
 - a. Employment protection.
 - b. Personal effects protection.
 - c. Health and accident insurance.
 - d. Legal liability protection.
 - 3. Communication.
 - 4. Training.
 - 5. Recognition.
 - 6. Conflict resolution.
 - a. Conflicts of interest.
 - b. Grievance procedures.
 - c. Clarify authority and limits of discretion.

7. Management style.

- a. Supportive.
- b. Non-bureaucratic.
- III. Churches as disaster resources.
 - A. **Ask students**: "Many emergency managers recognize the rich array of resources that local churches represent. What are some of the reasons that churches are helpful resources, especially during the community response and recovery from a disaster?"
 - B. **Record**: List student responses on the chalkboard.
 - C. **Display** Overhead 25-8; "Churches as Disaster Resources."
 - D. **Review** topics listed on overhead and **integrate** with student responses (adapted from Crawford, 1998, p. 33).
 - 1. Local groups.
 - a. Exist in community.
 - b. Community commitment.
 - 2. Rich in human resources.
 - 3. Low financial cost.
 - 4. Altruistic motivation.
 - 5. Sense of community.
 - 6. Large buildings.
 - 7. Public event experience.
 - 8. National network.
 - 9. International links.
- IV. Improvisations.

- A. **Explain**: While the above strategies are **illustrative** of a tiny sector of the community, **disasters precipitate improvisations**. Documentation of four important examples of these occurred following the 911 attacks on the World Trade Center.
- B. **Display** Overhead 25-9; "Post-911 Improvisations."
- C. **Review** and illustrate the topics listed on the overhead (adapted from Kendra and Wachtendorf 2003).

1. Mapping.

- a. Remind students that the offices of the NYC Emergency Management Agency, including the EOC, were located within the World Trade Center.
- b. "The original EOC at 7 WTC had GIS equipment, but the scope of the operation at Pier 92 was much larger, providing a variety of map products for different users. Furthermore, a number of personnel from different organizations worked there: students and professors from local colleges; information technology and other specialists from New York City; and representatives from ESRI (the ArcInfo vendor) among others." (pp. 130-131).

2. Waterborne evacuation.

- a. "According to Coast Guard officials, approximately 500,000 people left Manhattan by boat, whether by tour boat, military vessel, passenger ferry, or private craft." (p. 132).
- b. "The waterborne operation was a creative exercise, in which people rose to the occasion with all sorts of vessels, and it is also an instance, especially initially, of the kind of self-organization that is important in complex adaptive systems . . ." (p. 132).

3. Credentialing.

- a. Access badges had to be improvised due to WTC damages, including the NYC Office of Emergency Management.
- b. Initial access credential used was "... a blue and yellow badge featuring the OEM insignia." (p. 134).
 - 1) Easy to duplicate.

- 2) Lacked identification data.
- 3) "... computer-printed badge was essentially a piece of paper placed in a name-tag holder..." (p. 134).
- c. Later access credentials were "... plastic badges with a white background and the label 'WTC 2001'. These badges displayed a digital color image of the individual, the person's title and organizational affiliation, and a variety of codes indicating particular areas to which the person could have access." (p. 134).

Supplemental Considerations:

The **key message** of this section is to **enhance student understanding** of a few **illustrative** sectors of a community that are non-governmental and/or at times reflective of improvisation. Some professors will wish to **expand** this section through discussion of additional strategies and/or community sectors. Careful review of the chapter by Gillespie (1991) will provide numerous examples of both, if desired.

Objective 25.6 Identify five community conflict resolution strategies.

Requirements:

Use Overhead 25-10.

Remarks:

- I. The reality of community conflict.
 - A. Natural and ongoing process.
 - 1. Diversity of stakeholder interests.
 - 2. Ethnic, racial, class, and religious differences.
 - B. Post-impact phase elicits altruistic and heroic behaviors.
 - C. Much conflict is suspended temporarily.
 - D. Very quickly, however, **prior areas of conflict re-emerge** and new strains are created.
- II. **Positive functions of conflict** (when handled constructively).

- A. Stimulates creativity.
- B. Encourages consideration of alternatives.
- C. Causes better ideas to come forth.
- D. Results in better courses of action to be selected.
- III. Conflict resolution strategies.
 - A. **Display** Overhead 22-10; "Conflict Resolution Strategies."
 - B. **Review** and illustrate the strategies listed on the overhead.

1. Avoidance.

- a. Many issues are trivial.
- b. Issue can be perceived differently; "one persons triviality may be anothers thorn."
- c. Requires monitoring.

2. Give it back.

- a. Administrator may refer conflict issue back to those involved and request that they design an acceptable resolution.
- b. When successful, may enhance self-esteem of participants.

3. Impose a solution.

- a. Listen, then unilaterally decide.
- b. Urgent decision requirement.
- c. Protracted bickering.

4. Compromise.

- a. Requires all to give a bit.
- b. May mask more serious areas of dispute.
- c. Requires monitoring.

5. Collaboration.

- a. Ask each side to state their view.
- b. Manager reviews and identifies areas of agreement and key areas of disagreement.
- c. Focus can be directed toward key issues.
- d. Time consuming.
- e. When successful, maximizes probability of stable relationships in the future.

Supplemental Considerations:

Depending on the course context and professorial interests, this section may be **very brief**. Display of the overhead along with quick comment on the list of strategies may accomplish the objective. Some professors, however, may wish to incorporate a **case study** whereby to illustrate several of the conflict resolution strategies. This technique would enhance student understanding of this important topic. Others may incorporate additional class discussion and student generated illustrations into the section

Course Developer References:

- I. Aiken, Michael and Paul Mott (eds.). 1970. *The Structure of Community Power*. New York: John Wiley and Sons.
- II. Crawford, Peter. 1998. "Spiritual Issues and Recovery Management." *Australian Journal of Emergency Management* 13 (No. 2):32-34.
- III. Dynes, Russell, R. 1970. *Organized Behavior in Disaster*. Lexington, Massachusetts: Heath Lexington Books.
- IV. Giddens, Anthony. 1982. *Profiles and Critiques in Social Theory*. Berkeley, California: University of California Press.
- V. Gillespie, David F. 1991. "Coordinating Community Resources." Pp. 55-78 in *Emergency Management: Principles and Practice for Local Government*, edited by Thomas E. Drabek and Gerard J. Hoetmer. Washington, D.C.: International City Management Association.
- VI. Howard, B.W. 1999. "Managing Volunteers." *Australian Journal of Emergency Management* 14 (No. 3):37-39.

- VII. Kendra, James and Tricia Wachtendorf. 2003. "Creativity in Emergency Response to the World Trade Center Disaster." Pp. 121-146 in *Beyond September 11th: An Account of Post-Disaster Research*. Natural Hazards Research and Applications Information Center, Public Entity Risk Institute and Institute for Civil Infrastructure Systems. Special Publication No. 39. Boulder, Colorado: Natural Hazards Research and Applications Information Center, University of Colorado.
- VIII. Lindell, Michael K. and Carla S. Prater. 2003. "Assessing Community Impacts of Natural Hazards." *Natural Hazards Review* 4:176-185.
- IX. McEntire, David A. 2001. "Multi-organizational Coordination During the Response to the March 28, 2000, Fort Worth Tornado: An Assessment of Constraining and Contributing Factors." (Quick Response Report #143).
 Boulder, Colorado: Natural Hazards Research and Applications Information Center, University of Colorado.
- X. Millican, Pam. 1997. "Volunteers: A Vision." *Australian Journal of Emergency Management* 12 (No. 2):11-13.
- XI. Parsons, Talcott. 1950. *The Social System*. Glencoe, Illinois: The Free Press.
- XII. Sweet, Stephen. 1998. "The Effect of a Natural Disaster on Social Cohesion: A Longitudinal Study." *International Journal of Mass Emergencies and Disasters* 16:321-331.
- XIII. Warren, Roland. 1963. *The Community in America*. Chicago, Illinois: Rand McNally.
- XIV. Wenger, Dennis. 1978. "Community Response to Disaster: Functional and Structural Alterations." Pp. 17-47 in *Disasters: Theory and Research*, edited by E.L. Quarantelli. Beverly Hills, California: Sage Publications.
- XV. Yutzy, Daniel. 1970. "Priorities in Community Response." *American Behavioral Scientist* 13:344-353.